



DICT LEVEL III

COMPUTER APPLICATIONS PRACTICAL II

MONDAY: 27 November 2017.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

Additional instructions:

- 1. Save all your work in the flash disk provided and in a folder bearing your registration number.**
- 2. Work on each question should be saved in the subfolder contained in the folder created in number 1 above. The name of the subfolder should correspond to the question number.**
- 3. Your registration number MUST appear as a header on every printout containing your answers.**
- 4. You must indicate the number of the question answered on the header created in number 3 above.**

Note: The information in numbers 1-4 above must be computer generated.

At the end of the examination duration, you should hand in to the invigilator(s):

- (a) The flash disk containing your work.**
- (b) All printed work.**
- (c) All unused printing paper(s).**

QUESTION ONE

Create a word processor document named "Question One".

Use "Question One" document to key in solutions to questions one (a) to (e) below:

- (a) Describe the following spreadsheet errors:
 - (i) NUM! (2 marks)
 - (ii) CIRCULAR. (2 marks)
 - (b) Differentiate between "external references" and "remote references" as used in spreadsheets. (2 marks)
 - (c) Giving an example, define "circular reference" in context of spreadsheet application. (3 marks)
 - (d) Differentiate between "axis labels" and "data labels" as used in worksheets. (4 marks)
 - (e) Outline two advantages of using a master page in DTP publications. (2 marks)
- Print "Question One" document.

(Total: 15 marks)

QUESTION TWO

Using a word processor program, create a document named "Question Two".

Use "Question Two" document to save solutions to questions two (a) to (d) below:

- (a) Explain the importance of enforcing referential integrity in a database. (2 marks)
- (b) List three problems associated with a table in a First normal form (1NF). (3 marks)
- (c)
 - (i) List two constraints of a primary key. (2 marks)
 - (ii) Explain the purpose of "modules" as used in a database application. (2 marks)
 - (iii) Identify two shortcomings of "Microsoft Access database" as compared to other databases such as Microsoft SQL Server. (2 marks)

- (d) Highlight four advantages of using a desktop publishing package to produce a newsletter rather than a word processing package. (4 marks)

Print "Question Two" document.

(Total: 15 marks)

QUESTION THREE

XYZ Real Estate requires to design a publication.

Use a desktop publisher to perform the following tasks:

- (a) Create a one page publication and save it as "XYZ". (2 marks)

- (b) Set the following settings on the publication:

- Paper size A4.
- Orientation landscape.
- All margins should be 1.5cm.

(3 marks)

- (c) Create the design as shown below:

Offer

KASANJU ROAD			CASH PRIZE
SECTION	ROOMS	ASKING	
1	3	4.5 M	
1	2	3.0 M	
2	5	5.0 M	

XYZ

WE BUILD FOR THE FUTURE

BOOKING FORM

XYZ REAL ESTATE
P.O. BOX 01
Nairobi

NAME _____
DATE _____
ESTATE _____
SECTION _____
ROOMS _____

DEPOSIT
For official use only

Instalments
Amount per instalment

Official hours
8:00 - 5:00
everyday
except Sunday
and public holidays

CHECK OUT ON:
↑ ATHI RIVER
↑ RUIRU
↑ NAKURU
↑ LIMURU

Coming soon!

Save and print XYZ publication.

(15 marks)

(Total: 20 marks)

QUESTION FOUR

ABC Consultancy firm keeps its details in a computer database. The information below contains details obtained from two tables of the database:

Employees Table:

Employee ID	Employee Name	Department Name	Job title	Salary (Sh.)
7368	Mark Opiyo	Research	Clerk	58,000
7490	Philip Maina	Sales	Salesman	26,000
7520	Mohamed Ali	Sales	Salesman	22,000
7565	Kennedy Wafula	Research	Manager	49,750
7690	David Kirimi	Operations	Manager	48,500
7780	Titus Ole Tipis	Accounting	Manager	44,500
7790	John Onyango	Research	Analyst	70,000
7820	Patel Shah	Operations	Analyst	35,000

Department Table:

Dept Code	Department Name	Location
10	Accounting	Nairobi
20	Research	Nakuru
30	Sales	Mombasa
40	Operations	Kisumu

Required:

- (a) Create a database that could be used to store the above data and save it as "ABC Consult". (5 marks)
- (a) Using appropriate primary and foreign keys, create a relationship between the two tables. Enforce referential integrity between the tables. (2 marks)
- (b) Restrict the number of characters entered in Employee ID to four. (2 marks)
- (c) Create a form for each table and use it to enter the records shown in the tables above.
Save the forms as "Employ Form" and "Depart Form" respectively. (4 marks)
- (d) It is required that the dates on which the employees were hired be included in the database. Opiyo was hired on 10/06/1998, Maina on 15/08/1996, Ali on 16/03/1996, Onyango on 09/03/2003 while the rest were hired on 13/03/2004.
Insert a new field, name it "Date of Hire" in the Employees table and enter the data on the dates the employees were hired. (4 marks)
- (e) Create a query that displays employees who were employed after the year 2000. Save the query as "Latest Employees". (4 marks)
- (f) Create a report that displays the Employee Name, Department Name, Job Title and Salary grouped according to location. Save the report as "Employment". (4 marks)
- Save ABC Consult database and print "Employment" report.

(Total: 25 marks)

QUESTION FIVE

- (a) Create a workbook named "salary" with a worksheet named "lecturers". Enter the data below in lecturers worksheet.

	A	B	C	D
	Lecturer's Name	Hours worked	Rate per hour (Sh.)	Salary
1				
2	Dr. Peter Morse	160	1500	
3	Prof. Killian Mwooi	250	2000	
4	Ken Auma	350	1000	
5	Fred Kamau	200	1500	
6	Ahmed Mohamed	180	750	
7				

Required:

- (i) Bold and underline the title. (2 marks)
- (ii) Make all headings bold. (2 marks)
- (iii) Put borders on all entries of the sheet. (2 marks)
Save and print "lecturers" worksheet.
- (iv) Given that salary = hours worked * rate per hour, calculate the salary. (2 marks)
- (v) On cell B7 and D7 respectively, calculate the total number of hours worked and the total salary paid to all the lecturers. (2 marks)
- (vi) Format "rate per hour" and "salary" data to one decimal point. (1 mark)
- (vii) Create a pie chart for the lecturers' names and the hours worked columns. The pie chart should have an appropriate title, legend and each portion should show the percentage of hours accumulated by each lecturer. (4 marks)
- (viii) Show all formulas you have used in a new sheet, and save it as "formulas". (2 marks)
Save salary workbook and print formulas worksheet.

- (b) A furniture shop sells furniture to customers on credit. The credit terms request the customer to make a deposit of 25%. The balance after the total deposit is paid in monthly installments over 24 months without interest. The shop customers and furniture credits values are as shown below:

Customer's Name	Furniture value (Sh.)	Deposit	Balance	Monthly installment
Jane	75,000			
Smith	85,000			
Willy	65,000			
Abraham	40,000			
Ademba	25,000			

Required:

- (i) Design a spreadsheet of the data above and save it as "furniture". (1 mark)
- (ii) Make all headings bold and shade the cell background for headings in light grey colour. (1 mark)
- (iii) Format the furniture values to be preceded by "Ksh". (1 mark)
- (iv) Use a formula to calculate values for deposit, balance and monthly installment. (3 marks)
- (v) Sort the worksheet in alphabetical order of customer's name. (1 mark)
- (vi) On a new sheet, create a fully labelled "pie chart" using "customer's name" and "furniture value" columns. (1 mark)
Save "furniture" workbook and print "pie chart" worksheet.

(Total: 25 marks)

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